

ABSTRACT OF THE DISCLOSURE

5 A process for growing by chemical vapor
deposition a heteroepitaxial single crystal diamond is
disclosed. The process provides a substrate which
enables the growth of single crystal diamond which is
vapor coated on an iridium film. An intermediate
process for producing a composite composition with
diamond nuclei is also described. Further described are
composite compositions of metal oxide, iridium and
10 single crystal diamond films or diamond nuclei. Single
crystal diamond is useful in a variety of electronics
and acoustics fields.